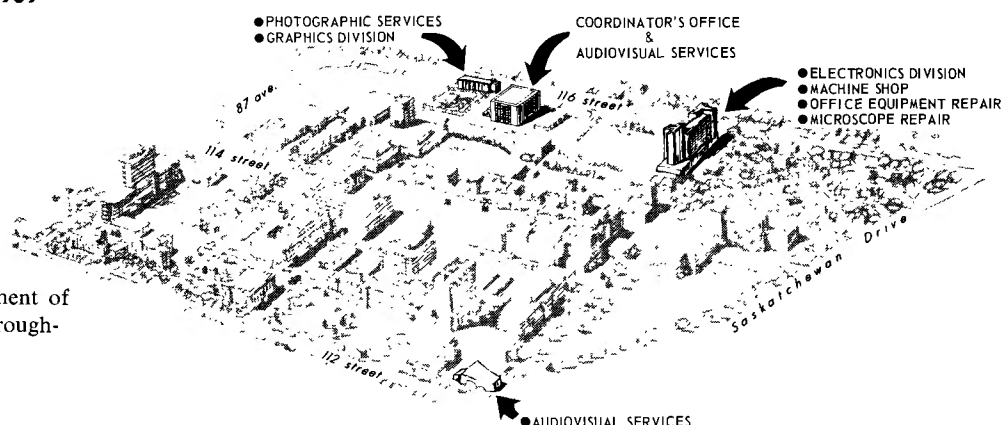


# FOLIO

SUPPLEMENT

SEPTEMBER 26, 1969



Offices and shops for the Department of Technical Services are located throughout the campus.

## REPORT / TECHNICAL SERVICES

The first *Report / Technical Services* (which appeared in FOLIO two weeks ago) contained a general description of the Department, and a few highlights about the work it was equipped to perform.

This *Report* gives a detailed list of specific services. Staff members may wish to file it as a reference. New services and methods are being regularly added; if the service you require is not listed here, consult with the appropriate supervisor.

### PHOTOGRAPHIC SERVICES

Supervisor A. CHERNICK  
Room 130 Printing Services Building,  
Telephone 4186 or 3812

#### Services available

1. Original photography—prints and slides, black and white and color.
2. Copy work—prints and slides, black and white and color.
3. Portraits.
4. Photomicrography, microphotography, macrophotography.
5. Specialized scientific and medical photography.
6. Murals.
7. Microfilming.
8. Film processing and printing, black and white and color.
9. Camera and accessory rentals.
10. Motion Pictures:
  - (a) Complete film production services, silent and sound,
  - (b) High-speed photography to 11,000 fps,

- (c) Time lapse,
- (d) Data recording,
- (e) Post filming services including editing,
- (f) Both 16mm and 35mm professional equipment uses,
- (g) Super 8 filming.

NOTE: photographic materials now available at Central Stores.

### GRAPHICS

Supervisor G. T. WORMSBECKER  
Assistant Supervisor R. W. MILLER  
Room 135 Printing Services Building,  
Telephone 3461 or 4184

#### Services available

1. Preparation of all types of drawings for publications, reports, theses, slides, TV, and motion pictures.
2. Production of visual aids such as TV cards, overhead projector slides, flip charts, wall maps, etc.
3. Drawings from life for the biological sciences.
4. Preparation of master drawings for printed circuits.
5. Posters and displays for conferences, symposia, etc.
6. Varityping of many type styles, including Greek and mathematical.
7. Diazo copying (all types).
8. Electrostatic copying (enlarged and reduced) onto paper, acetate, etc.
9. Advice and assistance regarding visual instructional materials and techniques, graphics standards for publication, etc.
10. Line negatives (all sizes) for printed circuitry, projectuals, or engineering reproduction.

### AUDIO VISUAL SERVICES

The following people are available for audio-visual services:

Campus as a whole—G. R. HILLS,  
General Services Building  
Henry Marshall Tory Building—J. DEWACHT  
and R. HUGGINS  
Clinical Sciences Building and  
University Hospital, W. A. GILLESPIE  
Consult telephone directory for telephone numbers.

#### Services available

1. Projectionist services.
2. Operation of public address and sound systems.
3. Supplying projection equipment to departments.
4. Setting up and operation of recording equipment at lectures, seminars, talks, etc.
5. Advice and assistance on purchase of equipment.

#### Equipment available for short-term loan:

1. 35mm slide projectors (Kodak Carousel AV-900).
2. 35mm slide projector, random access.
3. 16mm motion picture projectors (sound) including the following special projectors:
  - (a) 16mm projector (silent) variable speed; slowest frame rate is 13 per second,
  - (b) 16mm projector (photo data optical analyzer) which will project at the following frame speeds: 1, 2, 4, 6, 8, 12, 16 and 24 frames per second with no flicker,
  - (c) 16mm projector (magnetic sound).
4. 3 1/4 x 4 1/4 slide projectors.

5. Opaque projectors.
6. Filmstrip projectors.
7. Overhead projectors.
8. Tape recorders (several kinds, including battery-operated and cassette recorders).
9. Portable public address systems.
10. Projection screens.
11. Record players.

#### MACHINE SHOP

Supervisor, E. F. EICHENLAUB  
Assistant Supervisor, G. L. EDWARDS  
Room 132 New Engineering Centre,  
Telephone 4901

##### *Services available*

1. Design and construction of specialized apparatus and equipment.
2. Complete shop service; machining, fabricating, and welding.
3. Service and repair of mechanical apparatus and equipment.
4. Advice and assistance on proposed projects.
5. Modification of equipment and machines.
6. Sharpening of microtome knife blades.
7. Servicing centrifuges—both standard and ultra.

##### *Equipment is available to do the following:*

1. SAWING
  - (a) Band saw—36 inch throat—depth capacity to 12 inches—contouring to 36 inches diameter—band filing.
  - (b) Cut-off saw—circular capacity to 12 inches.
2. TURNING—largest lathe has a capacity of 7 feet between centres with a swing of 20 inches over bed and a 29-3/4 inch swing in gap.
3. DRILLING AND BORING—radial drill has a 5-foot arm and drilling capacity in steel of 3 inches.
4. MILLING—largest milling machine has a table travel of 60 inches and a ram travel (cross) of 27 inches.
5. WELDING
  - (a) Oxyacetylene
  - (b) Arc
  - (c) Tig, 500 amp maximum
  - (d) Mig
  - (e) Silver brazing.
6. FABRICATING
  - (a) Power shearing 10 ft. x 1/4 in. capacity
  - (b) Hand brake, 4 ft.
  - (c) Punching and notching on "Ironworker"
  - (d) Bending on a "Diacro" number 8 power bender, 3/8 in. x 4 in. flat and 1 1/4 in. mild steel bar capacity.
7. GRINDING AND LAPPING
  - (a) "Norton" tool and cutter grinder

- (b) Lapping machine, 5 inches diameter capacity
- (c) Microtome knife sharpener.
8. GAUGING
  - (a) "Scherr-Tumico" model P1600 Optical Comparator with photo print facility
  - (b) Registered Double "A" standard surface plate and gauge blocks in temperature-controlled room.
9. ELECTRO-POLISHING
  - (a) Stainless steel only
  - (b) Size of electro-polishing tank is 5 ft. x 2 1/2 ft. x 3 ft.

#### ELECTRONICS

Supervisor, J. G. A. BRUGMAN  
Assistant Supervisor, P. G. FEKETE  
Room 248 New Engineering Centre,  
Telephone 4901

##### *Services available*

1. Designing and building specialized electronic equipment.
2. Servicing any type of electronic equipment such as spectrophotometers, gas chromatographs, tape recorders, recording equipment including dynagraphs, television sets, etc. Factory trained technicians available for service work on "Tektronix" scopes, "Hewlett-Packard" data systems, "Cary" and "Gilford" spectrophotometers, and "Beckman" dynagraphs, as well as EAI Hybrid computers by June 1, 1969.
3. Electronics technicians are available on either a full time or part time basis for short or long periods of time.
4. Advice and assistance on technical problems.
5. Servicing all intercom installations and all sound systems on campus. There is no charge for this service.
6. A considerable amount of electronic equipment is available for loan; a catalogue listing the equipment can be obtained on request.
7. Advice and assistance on purchasing of equipment.
8. A preventive maintenance program is available to any department wishing regular servicing of electronic equipment.
9. A comprehensive library of technical bulletins and information on equipment has been built up which is available for the use of all University departments.
10. A complete storeroom of electronic parts.
11. Complete fabrication of printed circuit boards, single and double sided.

#### OFFICE EQUIPMENT REPAIR

Supervisor, R. R. REEDER  
Room 248 New Engineering Centre,  
Telephone 4901

##### *Services available*

1. Maintenance and repair on all lines of—
  - (a) dictation equipment,
  - (b) mechanical adding machines and calculators,
  - (c) electrical typewriters other than IBM,
  - (d) duplicating and photocopy machines,
  - (e) small office accessories such as reading accelerators, staplers (standard and electric), numbering stamps, etc.,
2. Loan machines available while your machine being repaired.
3. Equipment available for rent (no charge under 3 days).
4. Parts and accessories for all lines of dictating machines, adding machines and calculators.  
Tapes and log pads available through either Central Stores or Office Equipment Repair.

#### MICROSCOPE REPAIR

Supervisor, R. J. CUNNINGHAM  
Room 130A New Engineering Centre,  
Telephone 4901

##### *Services available*

1. Maintenance and repair of microscopes.
2. A preventive maintenance program is available to any department wishing regular servicing of microscopes.

#### GLASSBLOWING

Supervisor, C. SHOTT (Chemistry Department)  
Room 160 Chemistry Building,  
Telephone 3513

##### *Services available*

1. Scientific glassblowing to your specifications.

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#### TECHNICAL SERVICES TELEPHONE DIRECTORY

Co-ordinator	3302
W. H. Jopling	
Room 372, General Services Building	
Graphics	3461
Electronics	4901
Glassblowing	3513
Machine Shop	4901
Microscope Repair	490
Office Equipment Repair	4901
Photo Services	4186 or 3812
Projection Services and Equipment	3923

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